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June 05, 2019

David J. Bradley, Clerk

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION**

ALARM.COM INCORPORATED, and
ICN ACQUISITION, LLC,

Plaintiffs,

VS.

IPDATATEL, LLC,

Defendant.

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CIVIL ACTION NO. H-18-2108

MEMORANDUM OPINION AND ORDER

When a system is changed and improved using computer technology that already exists, is that improvement patentable? This case raises that question. To decide whether ipDatatel, LLC infringed Alarm.com Incorporated's patents for home-security technology, the court must determine if the technology was patentable in the first place.

ipDatatel denies infringement, arguing that the asserted claims cannot be patented under 35 U.S.C. § 101, and moves to dismiss Alarm.com's second amended complaint on that basis. Alarm.com responded, ipDatatel replied, the parties submitted supplemental briefing, and the court heard arguments of counsel. Based on the second amended complaint; the motion, response, reply, and supplemental briefing; the record; counsels' arguments; and the applicable law, the court denies the motion to dismiss. (Docket Entry No. 118). The parties must jointly submit a proposed amended scheduling and docket control order by **June 28, 2019**, setting out reasonable, efficient, fair, and cost-effective steps for discovery, dispositive motions, and trial, with deadlines for each.

The reasons for this ruling are explained in detail below.

I. Background¹

Alarm.com was incorporated in Delaware in 2000 and introduced its first wireless home-security system in 2003. (Docket Entry No. 46 at ¶¶ 2, 15). Alarm.com’s technology integrates a home-alarm system with different “smart” devices, connecting such devices as a tablet computer or a smartphone, into the system, controlled by an application, or “app,” that uses an online platform. (*Id.* at ¶ 14). Alarm.com operates in North and South America and Australia. (*Id.* at ¶ 16). Its wholly owned subsidiary and coplaintiff ICN Acquisition, LLC owns many of the patents-in-suit. (*Id.* at ¶ 17).

ipDatatel was incorporated in Texas in 2007. (*Id.* at ¶ 18). It too manufactures home-security systems and operates data centers for smart-device applications, offering systems with “interactive security capabilities” similar to Alarm.com’s home-security systems. (*Id.* at ¶¶ 19–20). ipDatatel markets its products throughout the United States. (*Id.* at ¶ 22).

The complaint alleges that the companies compete in the “home security or home automation market,” and that the “patents-in-suit . . . give Alarm.com a competitive edge.” (Docket Entry No. 102 at 9:14–15). Alarm.com alleges that ipDatatel infringes U.S. Patent Nos. 7,113,090; 7,633,385; 7,956,736; 8,478,871; and 9,141,276. (Docket Entry No. 46 at ¶ 12).

A. The ’090 Patent

The ’090 patent, “System and Method for Connecting Security Systems to a Wireless Device,” issued in September 2006. (*Id.* at ¶ 24). Before this patent, home-security systems typically consisted of a security panel, sensors, and a keypad inside a home. (*Id.* at ¶ 25). The keypad controlled the system through a central monitor which, when armed, would detect “state

¹ The facts are drawn from the second amended complaint’s well-pleaded allegations, accepted as true for the purpose of this motion, and the documents that are referred to or attached to the complaint and properly considered at this stage. See *Brand Coupon Network, L.L.C. v. Catalina Mktg. Corp.*, 748 F.3d 631, 634 (5th Cir. 2014).

changes” from the sensors. (*Id.* at ¶ 26). The ’090 patent inventors recognized that this system did not relay “normal” activity, for example, the opening or closing of a door or window. This capability could provide homeowners useful information when the system was not armed, turning a home-security system into a kind of ever-alert “nanny cam.” (*Id.* at ¶ 27). The patented technology allows both an unarmed and armed system to transmit these and similar events to a database through a modem. (*Id.* at ¶ 28). A homeowner could monitor not only break-ins, but also such events as when adolescent children returned from a night out, or when a housekeeper arrived or left.

The second amended complaint alleges that by transmitting both “alarm” events and “normal” activity, the ’090 patent “extract[s] useful information” from “conventional security panels and sensors,” improving “the operation of those security sensors and panels in an unconventional manner.” (*Id.* at ¶ 29). According to the second amended complaint, the prior art “neither taught using normal activity nor expressed any appreciation for the substantial advantages associated with utilizing this data in combination with alarm events.” (*Id.* at ¶ 30). The second amended complaint alleges that the ’090 patent addresses “the problems associated with processing and retaining substantial volumes of activity associated with both normal activity and alarm events,” because the new system “effectively process[es]” the data “without being overwhelmed.” (*Id.* at ¶¶ 31, 33). The ability to process that information, according to Alarm.com, was “not well-understood, routine, or conventional.” (*Id.* at ¶ 33).

The ’090 patent also allows users to create notification preferences. (*Id.* at ¶ 34). Older systems called the homeowner’s landline telephone and, if no one answered, alerted the local police, resulting “in a high occurrence of false alarms” that “deplete[d] police resources and undermine[d] the credibility” of home-security systems. (*Id.* at ¶¶ 36–38; ’090 Patent at 1:39–41).

The '090 patent allows homeowners to choose the types of events they want to be notified about, and how and whether to respond—through text message, email, or phone call—before the system contacts law enforcement. (Docket Entry No. 46 at ¶¶ 41–43). The second amended complaint alleges that this notification system was “not well-understood, routine, or conventional in light of the prior art systems.” (*Id.* at ¶¶ 42, 46).

B. The '385 and '736 Patents

These patents, both entitled “Method and System for Communicating With and Controlling an Alarm System From a Remote Server,” issued in December 2009 and June 2011. (*Id.* at ¶¶ 47–48). The '736 patent, a continuation of the '385 patent, shares its specification. (*Id.* at ¶ 48). Both “provide an upgrade unit that allows a user to keep an existing legacy alarm system rather than replacing that system.” (*Id.* at ¶ 49).

Before these patents, homeowners had to remove and replace home-security systems to modify or upgrade them. (*Id.* at ¶ 50). A legacy alarm system usually had a controller connected to sensors throughout the house. (*Id.* at ¶ 52). Homeowners controlled the system using a keypad connected to the alarm controller through a “keypad bus.” (*Id.* at ¶¶ 53–54). This system communicated with the external monitoring service—a security company—through a public telephone line. (*Id.* at ¶¶ 55, 61). The second amended complaint refers to the telephone line as a “single point of failure” that, if cut, could “prevent[] notification of authorities in the event of a break-in.” (*Id.* at ¶ 62). The second amended complaint alleges that legacy systems could send information out to the external monitoring service but could not be remotely controlled or upgraded. (*Id.* at ¶¶ 63–64). Newer systems that provide two-way communication between the system and a central monitoring service required removing and replacing the entire existing system. (*Id.* at ¶¶ 65–66).

The '385 and '736 patents address those shortcomings by allowing homeowners to upgrade legacy systems by “coupling” a new communications unit with the existing keypad bus. (*Id.* at ¶ 69). The communications unit transmits and receives information through the existing security panel, using the keypad bus in an “unconventional way to achieve unexpected and useful results.” (*Id.*). The communications unit also connects with a remote server, allowing homeowners to control the system from outside the house. (*Id.* at ¶ 72). According to Alarm.com’s second amended complaint, remote access and control of the system were “not well-understood, routine, or conventional.” (*Id.*).

C. The '871 Patent

The “Gateway Registry Methods and Systems” patent issued in July 2013 and assigns unique serial numbers to “gateways,” devices that connect two networks. (*Id.* at ¶¶ 75, 78). This allows streamlined identification by “gateway registries.” (*Id.* at ¶ 80). The second amended complaint alleges that this identification method was unconventional and reduces gateway registries’ computing load. (*Id.*).

D. The '276 Patent

The “Integrated Interface for a Mobile Device” patent issued in September 2015 and relates to improving how homeowners remotely control their home-security system. (*Id.* at ¶¶ 83, 84). Before the patent, homeowners could control their security system with only “a dedicated device designed specifically, and exclusively, for the . . . system.” (*Id.* at ¶ 84). The '276 patent claims software that allows homeowners to control and monitor their system through a smart-device application that synchronizes the smart device to the system. (*Id.* at ¶ 86). The second amended complaint alleges that “the '276 patent improved the preexisting home security technology . . . to permit a mobile device running an app[lication] to perform the same functions previously

accomplished through a dedicated device.” (*Id.* at ¶ 87). According to the second amended complaint, having different companies monitor the security system and supply the control device were not well-understood, routine, or conventional, and neither was the software enabling the synchronization between the homeowner’s smart device and their security system. (*Id.* at ¶ 88).

E. Procedural History

This case was transferred from the Eastern District of Texas with ipDatatel’s motion to dismiss pending. (Docket Entry Nos. 48, 67). This court denied the motion without prejudice and ruled first on the parties’ claim-construction disputes. (Docket Entry No. 91). The parties presented oral argument on their proposed constructions, the court issued its claim-construction Memorandum and Opinion, and ipDatatel reurged the motion to dismiss. (Docket Entry Nos. 117, 118, 122). The court ordered the parties to explain the relationship between the claim construction and ipDatatel’s motion. (Docket Entry Nos. 126, 127, 132, 140, 143). Both parties’ briefs and arguments, which have consistently been thorough and helpful, are set out below.

II. The Legal Standards

A. Rules 12(b)(6) and 12(c)²

The Rule 12(b)(6) and Rule 12(c)³ standards are the same. *Gentilello v. Rege*, 627 F.3d 540, 543–44 (5th Cir. 2010). Rule 12(b)(6) allows dismissal if a plaintiff fails “to state a claim upon which relief can be granted.” FED. R. CIV. P. 12(b)(6). A complaint must contain “enough facts to state a claim to relief that is plausible on its face.” *Bell Atl. Corp. v. Twombly*, 550 U.S.

² The Federal Circuit reviews a “dismissal for failure to state a claim under the law of the regional circuit.” *Univ. of Fla. Research Found., Inc. v. Gen. Elec. Co.*, 916 F.3d 1363, 1367 (Fed. Cir. 2019).

³ “A motion brought pursuant to [Rule] 12(c) is designed to dispose of cases where the material facts are not in dispute and a judgment on the merits can be rendered by looking to the substance of the pleadings and any judicially noticed facts.” *Great Plains Tr. Co. v. Morgan Stanley Dean Witter & Co.*, 313 F.3d 305, 312 (5th Cir. 2002) (quotation and citation omitted).

544, 570 (2007). Rule 8 “does not require ‘detailed factual allegations,’ but it demands more than an unadorned, the-defendant-unlawfully-harmed-me accusation.” *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Twombly*, 550 U.S. at 555). “A claim has facial plausibility when the plaintiff pleads factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged.” *Id.* (citing *Twombly*, 550 U.S. at 556). “The plausibility standard is not akin to a ‘probability requirement,’ but it asks for more than a sheer possibility that a defendant has acted unlawfully.” *Id.* (quoting *Twombly*, 550 U.S. at 556).

“To withstand a Rule 12(b)(6) motion, [a] complaint must allege ‘more than labels and conclusions,’” and “a formulaic recitation of the elements of a cause of action will not do.” *Norris v. Hearst Tr.*, 500 F.3d 454, 464 (5th Cir. 2007) (quoting *Twombly*, 550 U.S. at 555). “Nor does a complaint suffice if it tenders ‘naked assertion[s]’ devoid of ‘further factual enhancement.’” *Iqbal*, 556 U.S. at 678 (alteration in original) (quoting *Twombly*, 550 U.S. at 557). A “complaint ‘does not need detailed factual allegations,’ but must provide the plaintiff’s grounds for entitlement to relief—including factual allegations that when assumed to be true ‘raise a right to relief above the speculative level.’” *Cuvillier v. Taylor*, 503 F.3d 397, 401 (5th Cir. 2007) (quoting *Twombly*, 550 U.S. at 555). “Conversely, when the allegations in a complaint, however true, could not raise a claim of entitlement to relief, this basic deficiency should be exposed at the point of minimum expenditure of time and money by the parties and the court.” *Id.* (quotation and alteration omitted).

The court should generally give the plaintiff a chance to amend under Rule 15(a) before dismissing the action with prejudice, unless to do so would be futile. *See Carroll v. Fort James Corp.*, 470 F.3d 1171, 1175 (5th Cir. 2006); *Great Plains*, 313 F.3d at 329 (“[D]istrict courts often afford plaintiffs at least one opportunity to cure pleading deficiencies before dismissing a case, unless it is clear that the defects are incurable or the plaintiffs advise the court that they are

unwilling or unable to amend in a manner that will avoid dismissal.”). A court has discretion to deny a motion to amend for futility if the amended complaint would fail to state a plausible claim. *Villarreal v. Wells Fargo Bank, N.A.*, 814 F.3d 763, 766 (5th Cir. 2016).

B. Section 101 of the Patent Act

“Section 101 of the Patent Act defines the subject matter eligible for patent protection.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014). Section 101 provides that “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101. “An invention may be patented only if it fits within one of the statutory classes of subject matter.” 1 CHISUM ON PATENTS § 1.01 (2018) (citing *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 483 (1974)). “The general purpose of the statut[e] is to limit patent protection to the field of applied technology, what the United States [C]onstitution calls ‘the useful arts.’” *Id.* (citing U.S. CONST. art. 1, § 8 cl. 8)).

“[T]he language of § 101 is extremely broad.” *J.E.M. AG. Supply, Inc. v. Pioneer Hi-Bred Int’l, Inc.*, 534 U.S. 124, 130 (2001). Even so, § 101 excludes abstract ideas from patentable subject matter. *See Alice*, 573 U.S. at 216 (“We have long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013))). “At the same time, [the Court] tread[s] carefully in construing this exclusionary principle lest it swallow all of patent law.” *Id.* at 217 (citing *Mayo Collaborative Servs. v. Prometheus Labs.*, 566 U.S. 66, 71 (2012)). “At some level, all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas. Thus, an invention is not rendered ineligible for patent simply because it involves an abstract concept.” *Id.* (quotation and citation

omitted) (alteration in original). “Accordingly, in applying the § 101 exception, [courts] must distinguish between patents that claim the ‘buildin[g] block[s]’ of human ingenuity and those that integrate the building blocks into something more, thereby transform[ing] them into a patent-eligible invention.” *Id.* (citations omitted) (alterations in original).

“Patent eligibility . . . is a question of law that may contain underlying issues of fact.” *In re Marco Guldenaar Holding B.V.*, 911 F.3d 1157, 1159 (Fed. Cir. 2018); *see Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016). “Like other legal questions based on underlying facts, this question may be, and frequently has been, resolved on a Rule 12(b)(6) or (c) motion where the undisputed facts, considered under the standards required by that Rule, require a holding of ineligibility under the substantive standards of law.” *SAP Am., Inc. v. Investpic, LLC*, 898 F.3d 1161, 1166 (Fed. Cir. 2018); *see Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1007 (Fed. Cir. 2018). But “plausible factual allegations may preclude dismissing a case under § 101 where, for example, ‘nothing on th[e] record . . . refutes those allegations as a matter of law or justifies dismissal under Rule 12(b)(6).’” *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018) (quoting *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1097 (Fed. Cir. 2016)) (alterations in original). The Federal Circuit reviews eligibility conclusions *de novo* and any underlying factual findings for clear error. *See, e.g., Alcon Research Ltd. v. Barr Labs., Inc.*, 745 F.3d 1180, 1188 (Fed. Cir. 2014).

III. Analysis

A. The Alice Framework

Alice set out a two-step test for evaluating eligibility under § 101. At step one, the court “determine[s] whether a claim ‘is directed to a patent-ineligible concept,’ such as an abstract idea.” *Univ. of Fla. Research Found.*, 916 F.3d at 1366 (quoting *Alice*, 573 U.S. at 218). If the claim is

directed to a patent-ineligible concept, the court “determine[s] at step two whether the claim ‘contains an inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Id.* (quoting *Alice*, 573 U.S. at 221).

To evaluate whether asserted claims “are directed to a patent-eligible concept,” *Alice*, 573 U.S. at 218, the court examines “‘the focus of the claimed advance over the prior art’ to determine if the character of the claim as a whole, considered in light of the specification, is directed to excluded subject matter,” *Trading Techs. Int’l, Inc. v. IBG LLC*, 921 F.3d 1084, 1092 (Fed. Cir. 2019) (quoting *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1338 (Fed. Cir. 2017)). “[F]undamental . . . practice[s] long prevalent in our system of commerce” are abstract ideas. *Alice*, 573 U.S. at 219. So, too, are “methods of organizing human activity.” *In re TLI Communc’ns LLC Patent Litig.*, 823 F.3d 607, 613 (Fed. Cir. 2016). In the computer-software context, “collecting information, analyzing it, and displaying certain results of the collection and analysis” are abstract concepts. *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). “[M]erely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract.” *SAP*, 898 F.3d at 1167 (quoting *Elec. Power*, 830 F.3d at 1354).

In “cases involving computer-related claims,” the step-one analysis may be complicated by “close calls about how to characterize what the claims are directed to.” *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1348 (Fed. Cir. 2016) (quoting *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016)). The court may defer determining whether the claims are drawn to abstract ideas, because “an analysis of whether there are arguably concrete improvements in the recited computer technology [can] take place under step two.” *Id.* (quoting *Enfish*, 822 F.3d at 1339). If it is “clear that the specific improvements in the recited computer

technology go beyond ‘well-understood, routine, conventional activit[ies],’” the court may bypass step one and find that the patent satisfies § 101. *Id.* (alteration in original); *see DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257–59 (Fed. Cir. 2014); *see also Ancora Techs., Inc. v. HTC Am., Inc.*, 908 F.3d 1343, 1348–49 (Fed. Cir. 2018).

To evaluate whether asserted claims satisfy *Alice*’s second step of “search[ing] for an ‘inventive concept,’” *Alice*, 573 U.S. at 217, the court considers “the elements of each claim both individually and as an ordered combination to determine whether the additional elements transform the nature of the claim into a patent-eligible application,” *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1289 (Fed. Cir. 2018) (quotation omitted). A claim directed to an abstract idea “must include ‘additional features’ to ensure that the claim is more than a drafting effort designed to monopolize the abstract idea.” *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 773 (Fed. Cir. 2019) (quotations and alterations omitted); *see also Trading Techs.*, 921 F.3d at 1093 (“Step two ‘looks more precisely at what the claim elements add’ to determine if ‘they identify an inventive concept in the application of the ineligible matter to which . . . the claim is directed.” (quoting *SAP*, 898 F.3d at 1167) (alteration in original)). “These additional features cannot simply be well-understood, routine, conventional activities previously known to the industry.” *ChargePoint*, 920 F.3d at 773 (quotation and alteration omitted); *see Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018) (“The second step of the *Alice* test is satisfied when the claim limitations involve more than performance of well-understood, routine, and conventional activities previously known to the industry.” (quotation and alteration omitted)).

B. Resolving Eligibility on a Motion to Dismiss

Citing *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121 (Fed. Cir. 2018), Alarm.com argues that an *Alice* step-two analysis at the pleading stage is premature,

because there are disputed factual allegations as to whether the asserted claims are inventive. *Aatrix* involved two patents “directed to systems and methods for designing, creating, and importing data into a viewable form on a computer so that a user can manipulate the form data and create viewable forms and reports.” 882 F.3d at 1123. The district court granted the defendant’s motion to dismiss the amended complaint based on ineligibility because the claim elements were directed to abstract ideas and failed to present inventive concepts, and denied the plaintiff’s motion for leave to file a second amended complaint. *Id.* at 1124–1126.

The Federal Circuit reversed. *Id.* at 1130. The appellate court explained that “patent eligibility can be determined at the Rule 12(b)(6) stage,” but “only when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law.” *Id.* at 1125. Under *Alice* step two, if the asserted claim elements “involve well-understood, routine, [and] conventional activity previously engaged in by researchers in the field, they do not constitute an inventive concept,” but “[w]hether the claim elements or the claimed combination are well-understood, routine, [and] conventional is a question of fact.” *Id.* at 1128 (quotation and citation omitted); *see also ChargePoint*, 920 F.3d at 773 (this issue “is a question of fact that must be proven by clear and convincing evidence” (quotation omitted)); *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d 1354, 1355 (Fed. Cir. 2018) (per curiam) (“Whether a claim element or combination of elements would have been well-understood, routine, and conventional to a skilled artisan in the relevant field at a particular point in time may require weighing evidence, making credibility judgments, and addressing narrow facts that utterly resist generalization.” (quotations and alterations omitted)).

The Federal Circuit found that the proposed second amended complaint “supplie[d] numerous allegations related to the inventive concepts present in the claimed form file

technology.” *Id.* at 1127. The proposed complaint “describe[d] the development of the patented invention, including the problems present in prior art computerized form file creation,” and “present[ed] specific allegations directed to improvements and problems solved by the . . . patented inventions.” *Id.* There were also “concrete allegations . . . that individual elements and the claimed combination are not well-understood, routine, or conventional activity,” and that “the claimed combination[] improve[d] the functioning of the computer.” *Id.* The district court abused its discretion in denying the plaintiff’s motion for leave to amend, because the proposed complaint raised factual questions that could not then “be answered adversely to the patentee.” *Id.*; *see also Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1342 n.4 (Fed. Cir. 2018) (“[R]esolution at the 12(b)(6) or Rule 12(c) stage is . . . inappropriate where claim elements are adequately alleged to be more than well-understood, routine, or conventional.”); *Berkheimer*, 881 F.3d at 1370 (reversing a summary judgment based on patent-eligibility because the claim limitations were “directed to the arguably unconventional inventive concept described in the specification”).

That said, *Aatrix* does “not stand for the proposition that a plaintiff can avoid dismissal simply by reciting in the complaint that the invention at issue is novel and nonconventional.” *British Telecomm. plc v. IAC/InterActiveCorp*, No. 18-366-WCB, 2019 WL 438335, at *20 (D. Del. Feb. 4, 2019); *cf. Geter v. Fortenberry*, 849 F.2d 1550, 1553 (5th Cir. 1988) (“[C]omplaints containing conclusory allegations, absent reference to material facts, will not survive motions to dismiss.”). To survive *Alice* scrutiny, the pleading must allege facts, captured in the asserted claims, showing that the claim elements, alone or in an ordered combination, were “not well-understood, routine, or conventional activity.” *Aatrix*, 882 F.3d at 1128. The patents at issue and Alarm.com’s second amended complaint must do more than “simply recite[] the use of generic features . . . as well as routine functions . . . to implement the underlying idea[s].” *Affinity Labs of*

Tex., LLC v. DIRECTV, LLC, 838 F.3d 1253, 1262 (Fed. Cir. 2016); *see also Athena Diagnostics, Inc. v. Mayo Collaborative Servs., LLC*, 915 F.3d 743, 755 (Fed. Cir. 2019) (affirming dismissal of a second amended complaint because the patentee failed to direct the court to complaint allegations that the invention was “anything other than standard and known per se in the art” (quotation omitted)); *SAP*, 898 F.3d at 1168–69 (“Here, all of the claim details identified by [the patentee] fall into one or both of two categories: they are themselves abstract; or there are no factual allegations from which one could plausibly infer that they are inventive.”).

Upaid Systems, Ltd. v. Card Concepts, Inc., 17-C-8150, 2019 WL 1331832 (N.D. Ill. Mar. 25, 2019), is instructive. Upaid sued Card Concepts for alleged infringement, and Card Concepts moved for judgment on the pleadings on the ground that the claims were ineligible for patenting under § 101. *Id.* at *1. Focusing on *Alice*’s second step, the court found that the complaint allegations and the patent specification “describe[d] the development of the patent invention, including the problems present in the prior art.” *Id.* at *3 (quotation omitted). Upaid’s complaint alleged “how the inventions disclosed in the . . . [p]atent [were] improvements over the prior art and enable the operation of advanced communications services regardless of equipment or network hardware limitations.” *Id.* (quotation and alteration omitted). According to the complaint:

The invention(s) disclosed in the . . . patent enable advanced communication services, which are normally dependent on the carriers’ (e.g., network) equipment and thus restricted by the carriers’ equipment, to operate over the carriers’ equipment which the advanced communication services cannot normally operate. The ability to utilize advanced communication services, regardless of the user’s location, is highly desirable. For example, a user may have access depending on the city or country [where] they are located, or may have access at their place of business, but not their residence. At the time of the invention, the industry solution to this problem was to upgrade operating systems, software and hardware that can facilitate the operation of the advanced communication services. The industry solution was time consuming, took substantial effort and was very expensive. However, instead of upgrading and replacing the operating systems, hardware and software, the ’947 patent improved the operation of the carriers’ equipment and

networks by enabling the advanced communication services to operate on the carrier's equipment and networks via Upaid's enhanced platform.

Id.

Card Concepts argued that the court should resolve eligibility on the pleadings because Upaid had admitted that the invention was implemented on a network using generic computer components, failing *Alice*'s second step. *Id.* The court rejected that argument, concluding that the complaint sufficiently alleged how the invention "was 'directed to the improvement in the functioning of' an existing technology." *Id.* (quoting *Enfish*, 822 F.3d at 1338). The court also concluded that Card Concepts had failed "to identify a clear statement in the specification, complaint, or other material properly [considered on a motion for judgment on the pleadings] that undermine[d] Upaid's allegations that its invention was not well understood, routine, and conventional." *Id.* at *4 (quotation and alteration omitted).

These principles are analyzed below against the record, the statute, and the case law.

C. The Patents at Issue

i. The '090 Patent

ipDatatel focuses on claim 40, which describes:

A computer implemented method for automatic notification of security information to subscribed users based on user specified information wherein the security information is communicated from security devices associated with the subscription, the method comprising the steps of:

storing user profile information based on a user subscription wherein profile information comprises notification preferences;

receiving communications that include security device information associated with one or more remote security devices associated with a subscribed user;

processing the security device information from the one or more remote security devices;

displaying the processed information wherein the processed information comprises a combination of normal activity and alarm events; and

automatically forwarding the processed information to the subscribed user associated with the remote security devices.

(’090 Patent at 39:3–21).

ipDatatel argues that this claim does not “supply an inventive concept,” because:

- the patented technology of “processing a combination of normal activity in addition to alarm activity, namely the ‘ability to effectively process security device information,’” is conventional, (Docket Entry No. 48 at 8);
- more specifically, “claim 40 does not require the alarm events and normal activity to be ‘effectively processed,’ making this allegation irrelevant to the [eligibility] analysis,” (*id.*);
- the “allegations about ‘normal activity’ and ‘processing’ are . . . functional and results-oriented,” and Alarm.com “fails to allege how transmitting normal activity . . . provides the ability to effectively process security device information which includes a combination of normal activity and alarm events,” (*id.* at 8–9); and
- having users specify “preferences is the exact opposite of an improvement in computer technology or the functioning and operation of the computer.” (*Id.*).

ipDatatel argues that the ’090 patent’s other claims also fail *Alice*’s second step. It identifies the weaknesses in each claim as follows:

- Claim 21, which “is substantially the same as claim 40, but adds limitations that information is received ‘across multiple locations’ and displayed ‘through a single online user interface,’” does not describe an unconventional approach, because “receiving and displaying information from multiple locations” is not inventive. (*Id.* at 10).
- Claims 22, 38, and 39 “add functional steps reciting ‘remote[ly]’ changing, programming, and controlling security characteristics or devices,” and “merely instruct the performance of an abstract idea . . . on generic computer devices connected to a network and the Internet,” and fail to “set forth any ‘inventive concept.’” (*Id.* at 11).
- Claim 36, like claim 21, is “substantially the same as claim 40,” with the added “limitation that the security system [can] be ‘in an unarmed state.’” (*Id.*). That limitation “corresponds to nothing more than a security guard monitoring a business property when the business is open.” (*Id.*).
- Claims 37 and 45 recite “communication modes” used to receive information and data, which the patent specification “makes clear . . . were conventional.” (*Id.* at 11–12).

- Claims 43 and 44, which add limitations “that information is forwarded to the user ‘based on one or more defined triggering events” or “at the subscribed user’s request,” fail *Alice* step two because the limitations “are basic [abstract] concepts” that “do not transform claims into patent-eligible inventions.” (*Id.* at 12).

Focusing on claim 40, Alarm.com responds that each of the ’090 patent claims survives

Alice scrutiny, as follows:

- Claim 40 is inventive because, “for the first time in the home security industry, the ’090 patent allowed a subscriber to establish various ‘notification preferences’ based on ‘user specified information.’” (Docket Entry No. 54 at 21). Before the ’090 patent, “all alarm situations [were] treated in the same manner even though a user may desire responses in varying degrees of severity.” (*Id.*).
- Prior art “neither taught using normal activity nor expressed any appreciation for the substantial advantages associated with utilizing this data in combination with alarm events.” (*Id.*). Because the second amended complaint alleges how the ’090 patent solved prior-art problems through the collection, analysis, and dissemination of “normal” activity, “transmitting both alarm events and normal activity was not well-understood, routine, or conventional.” (*Id.*).
- Under the ’090 patent, a home-security device “effectively process[es] . . . a combination of normal activity and alarm events[] without being overwhelmed with too much data”—an unconventional, “specific technological improvement to existing . . . systems.” (*Id.*).

Alarm.com also argues that the other ’090 patent claims satisfy *Alice* step two, for the following reasons:

- Claims 40 to 45 of the ’090 patent are inventive because they offer homeowners a choice between sending information at regular intervals, based only on triggering events, or at a homeowner’s request. (*Id.*). As alleged, “establishing the circumstances under which notifications are sent [or] the manner under which notifications are sent was not well-understood, routine, or conventional.” (*Id.*).
- Claim 36 is inventive because a home-security device can notify homeowners of activity even when the system is unarmed. (*Id.* at 22; Docket Entry No. 121 at 18). The second amended complaint alleges that prior art systems were “confined to sounding an alarm [or] dispatching the police or another security entity,” and the asserted claims capture these allegedly unconventional improvements. (Docket Entry No. 54 at 22).

Alarm.com asks the court to find that ipDatatel fails to show by clear and convincing evidence that the ’090 patent does not supply an inventive concept. The issue is whether the second

amended complaint sufficiently alleges that individual elements or the claimed combination: (1) “are not well-understood, routine, or conventional activity”; or (2) “improve[] the functioning of the” existing security technology. *Aatrix*, 882 F.3d at 1128. At this stage and on this record, the court cannot resolve the allegations, “to the extent they are captured in the claims [and] create a factual dispute” that, to reach the result Alarm.com seeks, must be resolved as a matter of law in Alarm.com’s favor. *Berkheimer*, 881 F.3d at 1369; *see also Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1338 (Fed. Cir. 2017).

Like the pleading in *Aatrix*, Alarm.com’s “second amended complaint supplies numerous allegations related to the inventive concepts present in the claimed [home-security] technology.” 882 F.3d at 1127. The second amended complaint “describes the development of the patented invention, including the problems present in prior art [security systems].” *Id.* Before the ’090 patent, only “alarm” events triggered the systems. (’090 Patent at 1:64–66; *see* Docket Entry No. 46 at ¶ 30). When triggered, these prior-art systems would alert a central home-security monitoring service, which would contact the homeowner by phone to confirm the alarm situation, even if the homeowner preferred “responses in varying degrees of severity.” (’090 Patent at 1:38–41, 2:2–4; *see* Docket Entry No. 46 at ¶ 35). If that call went unanswered, the homeowner’s security company would notify police, resulting in high false alarm rates that “undermine[d] the credibility of systems that appear[ed] to repeatedly malfunction.” (’090 Patent at 1:38–41; *see* Docket Entry No. 46 at ¶¶ 36–37).

The second amended complaint alleges that claim 40 of the ’090 patent improves these prior-art systems in two unconventional ways. *See Aatrix*, 882 F.3d at 1127 (“[The pleading] then presents specific allegations directed to improvements and problems solved by [the] patented inventions.”). First, by automatically forwarding each homeowner’s preferred notifications, and

not just sounding an alarm or contacting the homeowner or the police, the invention lowers the high false-alarm rate of prior-art systems. ('090 Patent at 39:3–21; Docket Entry No. 46 at ¶ 44). According to the second amended complaint, reducing the number of false alarms reported to law enforcement “was rooted in improving home security technology.” (Docket Entry No. 46 at ¶ 45); *see Aatrix*, 882 F.3d at 1127 (“These allegations suggest that the claimed invention is directed to an improvement in the computer technology itself.”); *cf. Enfish*, 822 F.3d at 1335 (“Software can make non-abstract improvements to computer technology just as hardware improvements can, and sometimes the improvements can be accomplished through either route.”). The patent addressed the false-alarm rate in an unconventional manner because, as alleged, no existing system had used a similar notification scheme. ('090 Patent at 1:64–67, 2:1–2; Docket Entry No. 46 at ¶ 41).

Second, the complaint alleges that the '090 patent was the first to claim the ability to communicate “normal” activity when the system is unarmed. (Docket Entry No. 46 at ¶ 30). While prior systems could generate this data, they could communicate only “alarm” events. (Docket Entry No. 46 at ¶ 27). By collecting, processing, and disseminating information about “normal” activity,⁴ claim 40 increased the number and type of situations that could trigger a notification. As alleged, the patent “extract[s] additional useful information” that improved “the operation of [existing] security panels and security sensors in an unconventional manner.” (Docket Entry No. 46 at ¶ 29); *see Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1303 (Fed. Cir. 2016); *DDR Holdings*, 773 F.3d at 1257. Like the complaint in *Aatrix*, the second amended complaint alleges facts detailing the problems in using the prior art; how the inventors developed the patented invention; and how the asserted claims unconventionally solved the prior-art

⁴ ipDatatel disputes whether claim 40 captures the alleged inventive concepts. (Docket Entry No. 56 at 4). The claim preamble discloses the method of automatic notification, and the “processing” section states that the “information comprises a combination of normal activity and alarm events.” ('090 Patent at 39:3–21).

problems. The allegations support the inference that claim 40's elements were not previously well-understood and improved existing home-security technology.

ipDatatel argues that claim 40 fails to disclose inventive features because the hardware it uses is generic and automated notification based on user preferences is a conventional activity. (*See* Docket Entry No. 48 at 9). The “storing,” “receiving,” “processing,” and “displaying” tasks are also “generic concepts,” ipDatatel contends, which shows that the claim lacks inventiveness. (*See id.* at 9–10). These are disputed factual allegations and characterizations cannot be resolved at this stage, on this record. *Aatrix*, 882 F.3d at 1127–28. These arguments do not allow a clear-and-convincing finding that claim 40's ordered combination is conventional, routine, and well-understood. *See DDR Holdings*, 773 F.3d at 1259.

ipDatatel makes the same arguments about the '090 patent's other claims. For example, ipDatatel contends that independent claims 21 and 36 fail *Alice*'s second step because they are “substantially the same as claim 40.” (Docket Entry No. 48 at 10–11). Because ipDatatel does not offer a separate basis for the court to find that claims 21, 22, 36 to 39, and 43 to 45 lack inventive concepts, the second amended complaint and response present disputed factual allegations as to whether these claims are conventional, precluding an *Alice* step-two clear-and-convincing evidence determination at this stage. *Upaid*, 2019 WL 1331832, at *4.

The court denies the motion to dismiss to the extent it is based on the '090 patent.

ii. The '385 and '736 Patents

The parties agree that claim 1 of the '385 patent is representative of claim 1 of the '736 patent. (*See* Docket Entry No. 102 at 102:3–6). Claim 1 covers:

A system comprising:

a communications unit, coupled to a keypad bus of an alarm system controller unit and an external network via a plurality of communication modes, and configured to receive a first signal on the keypad bus from the alarm systems controller unit,

select a communication mode of the plurality of communication modes to communicate to the external network,^[5] and

transmit a first set of data comprising information from the first signal to the external network over the selected communication mode; and

a network server coupled to the external network and configured to receive the first set of data transmitted by the communications unit, and perform a pre-determined response to the information in the first set of data.

(’385 Patent at 12:30–45) (emphasis added).

ipDatatel’s arguments on claim 1 of the ’385 patent are as follows:

- Claim 1 describes only conventional activities, and that the second amended complaint allegations refer to a “legacy” system in order “to manufacture an inventive concept.” (Docket Entry No. 48 at 15). Those allegations are irrelevant to eligibility because the claim does not require a “legacy” system. (*Id.* at 15–16).
- The claim “merely recites pre-existing hardware, such as a bus, controller, network, and communications unit, performing routine, conventional functions that were well-known in the security industry.” (*Id.* at 16). The “communications unit” is not inventive because the ’385 patent “admits that using a ‘redundant’ communication mode with a telecommunications line was conventional.” (*Id.*). The “generic remote capabilit[ies],” “networking concepts,” and “select” and “perform a pre-determined response” functions are also conventional as a matter of law. (*Id.*).
- The ordered combination is conventional, because it describes the “order in which humans have long performed the abstract idea of monitoring a property and choosing how to communicate with the owner or another, when an event occurs at the property, after which the person responds to the event.” (*Id.* at 17).

ipDatatel contends that the other ’385 patent claims are patent-ineligible for the following reasons:

- Claims 5 and 6 fail to “add an inventive concept,” because they state that “the network server stores responses that correspond to generic ‘events or conditions’”; “selects the ‘pre-determined response’ from this set of responses”; and “requires the ‘pre-determined

⁵ The court construed this term to mean “determine which communication mode is the best for transmitting data to the external network at any point in time.” (Docket Entry No. 122 at 42).

response’ to be a description of the events or conditions form the stored response.” (*Id.*). ipDatatel analogizes claims 5 and 6 to claim 1 of the ’090 patent, arguing that they lack inventiveness for the same reasons. (*Id.*).

- Claims 7 to 10, which depend on claim 6, recite that event descriptions are transmitted to the homeowner over a variety of generic communications media, for example, emails and text messages, failing to supply an inventive element. (*Id.*).
- Claim 15, by adding a network server that sends “control information” to the “communications unit,” which sends “control data” to the “alarm system controller,” recites the basic transmission of information, a conventional activity. (*Id.*).⁶

Alarm.com responds that “the ’385 and ’736 patents embody the inventive concepts elucidated in the [patents’ shared] specification.” (Docket Entry No. 54 at 22). Alarm.com argues that:

- before these patents, “if an alarm system subscriber wanted increased communication capability, the subscriber could only remove the legacy alarm system and replace it with a new one,” (Docket Entry No. 121 at 19);
- the claimed “communications unit” gave “subscribers a second option” through the “innovative use of a communications unit coupled to the keypad bus,” (*id.*; Docket Entry No. 54 at 23);
- coupling a communications unit directly to a keypad bus “to facilitate remote communication was unconventional,” satisfying *Alice* step two, (Docket Entry No. 121 at 19); and
- “transmitting and receiving information from a security panel by a communications unit coupled to a keypad bus or communicating with a remote server through a plurality of different communications modes to allow remote access and control of a legacy alarm system” were not well-understood, routine, or conventional activities in the prior art. (*Id.*).

As to the ’385 patent’s other claims, Alarm.com contends that they “improve the operation of security systems by storing a set of responses and selecting the pre-determined response from the set (claim 5), and by providing a description to a user (claim 6) by either email (claim 7), text (claim 8), web browser (claim 9), or initiating a phone call (claim 10).” (*Id.* at 20). Alarm.com

⁶ ipDatatel argues that the ’736 patent fails *Alice* step two for the same reasons. (*Id.* at 19–20).

argues that claims 15 and 16 “use the keypad bus in a new and unconventional way to allow remote access and control of the alarm system” by “receiving control input from a user, converting it to control information, then transmitting the control information to . . . the communications unit[,] which in turn converts the information . . . and transmits [it] to the alarm system controller over the keypad bus.” (*Id.*). Alarm.com contends that ipDatatel “offers no facts . . . to support” finding that the ’385 and ’736 patents lack inventiveness, as § 101 requires. (*Id.*).

The question is whether there are factual disputes that must be resolved to evaluate inventiveness that preclude an *Alice* patent-eligibility determination on this record and at this stage. As in *Aatrix*, the specifications and the second amended complaint describe the prior-art problems and how the invention solved them by improving conventional technology through unconventional means.

The ’385 patent specification states that before the patent issued, a homeowner who wanted to upgrade an existing system had to replace the old system with a new one. (’385 Patent at 2:4–14; Docket Entry No. 46 at ¶ 50). The upgrade solved two significant drawbacks: (1) one-way communication from the system to a central monitoring service; and (2) communication over hardwire telecommunications lines that could be cut, severing the link between the home and the central monitoring service. (’385 Patent at 1:53–67; Docket Entry No. 46 at ¶¶ 55–56, 61–63). The ’385 and ’736 patents addressed these drawbacks in a cost-effective manner by providing an upgrade that allows for two-way communication with, and remote access to, the existing alarm system. (’385 Patent at 2:15–20; Docket Entry No. 46 at ¶¶ 69, 71). The upgrade includes a “communication unit” “coupled” to the existing system’s keypad bus, which “allows the alarm processor and keypad processor to communicate using . . . a serial digital protocol transmitted and received by the processors.” (Docket Entry No. 46 at ¶¶ 59, 69). The communications unit

enhances the existing system by “transmit[ing] and receiv[ing] information from the security panel as if it were a keypad.” (*Id.* at ¶ 69). This unit “communicates with a remote server . . . to allow remote access and control of the legacy alarm unit.” (*Id.* at ¶ 72).

According to the second amended complaint, the patents disclosed both hardware and software innovations. (*Id.* at ¶¶ 69–72; Docket Entry No. 102 at 68:22–24). The second amended complaint alleges that the invention’s software improves the operation of legacy systems by enabling two-way communication and remote access. (Docket Entry No. 46 at ¶¶ 69–72). The second amended complaint also alleges that both functions exceeded the design of the existing keypad bus, making the upgrade capable of unconventional use that enhanced prior-art system capabilities. (*Id.* at ¶¶ 69, 72). At oral argument, even though Alarm.com conceded that some of the patents-in-suit used generic components, it maintained that the communications unit claimed in the ’385 and ’736 patents was new hardware. (Docket Entry No. 102 at 68:18–21; *see* Docket Entry No. 121 at 19 (“The claimed ‘communications unit’ . . . was both a software and hardware innovation.”)).

ipDatatel argues that the communications unit is generic. The competing characterizations of the communications unit and software create disputed factual issues that preclude an eligibility determination based on clear and convincing evidence at this stage, on this record. (*See* Docket Entry No. 48 at 16).

ipDatatel argues that claim 1 does not include a legacy system and, as a result, the allegations about unconventional use are irrelevant to patent eligibility. (Docket Entry No. 48 at 15). The claim discloses a “system comprising: a communications unit, coupled to a keypad bus of an alarm system controller unit.” (’385 Patent at 12:30–32). The specification makes clear that the claim is directed to an existing alarm system. (*See, e.g.*, ’385 Patent at 1:8–11 (“The present

invention relates to . . . coupling a legacy alarm system to a server coupled to an external network via a plurality of monitored communications modes.”)). ipDatatel concedes this point in arguing that “Alarm.com does not assert that the ‘legacy’ controller unit [is] anything but conventional.” (Docket Entry No. 56 at 8; Docket Entry No. 48 at 15–16 (“The specification also establishes that the ‘alarm system controller,’ which includes the ‘keypad bus,’ is conventional.”)). Claim 1 captures both the legacy alarm system and the arguably inventive concept alleged in the second amended complaint.⁷ Because the second amended complaint alleges that the communications unit and the ordered combination of claim 1’s elements were not conventional and specifies how the upgraded unit improved the existing alarm system function, disputed factual issues as to inventiveness remain. *Aatrix*, 882 F.3d at 1128.

ipDatatel’s arguments about the other claims in the ’385 and ’736 patents hinge on whether claim 1 is patent-ineligible as a matter of law. Because the second amended complaint alleges enough facts to support its argument that claim 1 is inventive, and because ipDatatel fails to provide a separate basis to find by clear and convincing evidence that the other claims are patent-ineligible, disputed factual allegations remain.

The court denies the motion to dismiss to the extent it is based on the ’385 and ’736 patents.

iii. The ’871 Patent

The parties dispute whether the ’871 patent claims are patent-eligible. ipDatatel primarily attacks claim 1, which describes:

A gateway device for managing a set of local management devices at a location, the gateway device comprising:

⁷ As with the ’090 patent, ipDatatel’s argues that the ’385 patent lacks inventiveness because claim 1 describes functional tasks and uses generic components. But the second amended complaint alleges that the communications unit is a hardware innovation and that the software unconventionally improves the keypad bus by enabling two-way communication and remote control. ipDatatel also argues that claim 1’s ordered combination lacks inventiveness, but the record contains no basis to find as a matter of law that it is conventional under § 101.

a processor coupled to a memory;

a first interface coupled to the processor; wherein the first interface couples via a remote network to remote systems that are remote to the location;

a second interface coupled to the processor, wherein the second interface communicates with a local network including the set of local management devices; and

logic that sends via the remote network a request to a gateway registry, the request specifying a serial number of the gateway device, receives an address of a gateway server that has an account associated with the gateway device and an identification of the account, sends to the gateway server the identification of the account, and manages the set of local management devices using account information received in response to the identification.

(’871 Patent at 20:50–67). The parties also dispute whether claims 6, 17, 15, and 31 are patent-eligible. Claim 15 is directed to a “system for networks at a plurality of locations,” consisting of “control networks,” which include a subset of claim 1’s elements, such as a “gateway device”; a “management device”; a “gateway registry” with logic that identifies accounts using serial numbers; and a “server” with logic that gives “account information to the gateway device based on the [serial-number] identification.” (*Id.* at 21: 34–50). Claims 6 and 31 depend on claims 1 and 15, adding the limitation that “the serial number comprises the media access control (MAC) address of the gateway device.” (*Id.* at 21:12–14; 22:32–34). Claim 17 adds to claim 15 the limitation that “each gateway device includes a second interface that communicates with a local network, wherein the local network includes the management devices.” (*Id.* at 21:55–58).

ipDatatel argues that neither the claim 1 elements, nor their ordered combination, supply an inventive concept. (Docket Entry No. 48 at 22). According to ipDatatel:

- the ’871 patent specification acknowledges that including a serial number as a gateway identifier is conventional, by stating that the serial number may be a “MAC id” or an “Ethernet address,” both “well-established computer concepts that [were] not even described in the . . . patent,” (*id.* at 22–23);

- the “processor,” “memory,” and “interfaces” are only “generic computer components,” not inventive hardware additions, (*id.* at 23);
- the recited steps for “sending and receiving three types of [conventional] information over a network” are well-understood and routine activities, (*id.*);
- the “local management devices” are conventional security components, and the fact that they are described in such functional terms as “manage,” “control,” and “monitor” fails to show inventiveness, (*id.* at 23–24); and
- the ordered combination of the claim 1 elements “simply replicates the conventional steps a security guard might use when identifying a property to a person at a remote location and receiving instructions as to how to manage devices as that location based on the identification.” (*Id.* at 24);

ipDatatel also contends that the other ’871 patent claims fail to satisfy *Alice*’s second step because:

- claim 15’s “system” and “control network” perform “the same type of collection, analysis, and display of available information that is ineligible subject matter,” *id.*); and
- claims 6, 17, and 31 are also invalid, because they use a conventional “MAC” address device identification and incorporate the routine limitations disclosed in claims 1 and 15, (*Id.*).

Alarm.com responds that the ’871 patent provides an unconventional “way of using a gateway device in conjunction with a gateway registry, including manufacturing the gateway to have a specific serial number for identification by the gateway registry.” (Docket Entry No. 54 at 24). Alarm.com argues that:

- claim 1 satisfies *Alice*’s second step because “a gateway having a specific serial number that allows the gateway to uniquely identify itself to the gateway registry was not well-understood, routine, or conventional,” and “improves the operation and efficiency of the gateway registry” by reducing computing load, (*id.*);
- “gateway registry” is itself an inventive concept because the parties’ agreed claim construction defined the term to mean “a database that stores information associated with the gateway device, such as the associated serial number, the gateway server address, and account number,” (Docket Entry No. 121 at 21–22),

- ipDatatel identifies no basis that would show that “gateway registry” or “the distribution of roles among the ‘gateway registry,’ ‘gateway server,’ and ‘gateway,’” were conventional or routine, (*id.* at 22); and
- claims 6, 15, 17, and 31 are not conventional or routine for the same reasons, because they incorporate the claim 1 concepts that the second amended complaint alleges are inventive, such as “gateway,” “gateway device,” and account identification using a gateway-device serial number. (*Id.* at 22–23).

The second amended complaint alleges facts about the patent’s inventiveness that ipDatatel disputes. According to the second amended complaint, the ’871 patent survived double-patenting challenges during the patent prosecution. (Docket Entry No. 46 at ¶ 76). Although prior-art registries communicated with gateway devices using certain addresses, the ’871 patent system was the first to use gateways manufactured or programmed with “a specific serial number that allows the gateways to be uniquely identified by the gateway registry.” (*Id.* at ¶ 78). The second amended complaint alleges that this enabled the gateway registry “to communicate with gateways[] even if the gateway is not visible to the gateway registry,” an improvement that enhanced “the operation and efficiency of the gateway registry.” (*Id.* at ¶ 80).

The patented technology uses generic components, as ipDatatel argues. But that argument is, here, necessary but not sufficient to find patent ineligibility as a matter of law. “[T]hat the improvement is not defined by reference to ‘physical’ components does not doom the claims.” *Enfish*, 822 F.3d at 1339. With support from the prosecution history, the second amended complaint alleges that the approach was unconventional in improving gateway-registry functioning. *Aatrix*, 882 F.3d at 1128. A review of claims 1, 6, 15, 17, and 31 shows that they capture these concepts. On this record, these disputed factual questions cannot be answered adversely to Alarm.com, as needed to dismiss for clear and convincing evidence of patent ineligibility.

iv. The '276 Patent

ipDatatel focuses its ineligibility argument on claim 1, which states:

A security system comprising:
a monitoring system that is configured to monitor a premise, the monitoring system including a sensor that is installed at the premise, the sensor being adapted to sense a status of the premise; and

a mobile device that is provided separately from the monitoring system by a company that is different than a company that provides the monitoring system, the mobile device including applications that, when run on the mobile device, perform operations comprising:

performing a synchronization to associate the mobile device with the monitoring system;^[8]

based on the *synchronization*,^[9] receiving by the mobile device one or more data communications descriptive of sensor events detected by the monitoring system at the premise;

displaying on a display of the mobile device, a status interface area that includes status information related to the monitoring system based on the received one or more data communications;

displaying, on the display of the mobile device, a control interface area that enables a user to provide user input to control the monitoring system;

receiving user input defining a control operation for the monitoring system based on the control interface area; and

based on the received user input and the synchronization, sending one of more control communications that cause the monitoring system to perform the control operation defined by the received user input.

('276 Patent at 51:2–31 (emphasis added)).

The parties also dispute whether claims 2, 5, 13, 14, and 17 are patentable. Claim 13 is similar to claim 1 but adds in its preamble a “non-transitory computer-readable storage medium

⁸ The court held that this term was invalid for indefiniteness under 35 U.S.C. § 112. (Docket Entry No. 122 at 43).

⁹ The court construed “synchronization” to mean “performing a process, that involves more than account authentication or registration, that ensures consistency in state and time for some period.” (*Id.*).

storing instructions that, when executed by one or more processors, cause the more or more processors to perform” the recited steps. (*Id.* at 53:47–67; 54:1–7). Claims 2 and 14 depend on claims 1 and 13, adding the limitation that “at least one of the applications is *custom-built for the mobile device*.”¹⁰ (*Id.* at 51:32–33, 54:8–11 (emphasis added)). Claims 5 and 17 also depend on claims 1 and 13, adding the limitation of a detected “alarm” event that leads the “status interface [to] override[] a ‘lower priority’ application running on the mobile device to display a description of the alarm event by replacing at least a portion of the ‘lower priority’ application.” (Docket Entry No. 48 at 30; Docket Entry No. 121 at 25; ’276 Patent at 51:52–67, 52:1–3).

The parties’ disputed claim terms included “performing a synchronization to associate the mobile device with the monitoring system” and “custom-built for the mobile device,” which ipDatatel challenged as indefinite under 35 U.S.C. § 112. In February 2019, the United States Patent and Trademark Office approved Alarm.com’s request to correct the ’276 patent and replace “synchronization to associate” with “association to synchronize.”¹¹ (Docket Entry No. 143-1 at 3; Docket 143-2). The “patent, together with the [correction] certificate, [has] the same effect and operation in law on the trial of actions for cause thereafter arising if the same had been originally issued in such corrected form.” 35 U.S.C. § 255. As a result, the earlier disputed construction of “synchronization to associate” no longer applies.

ipDatatel argues that claim 1 “lacks any inventive element sufficient to render it patentable.” (Docket Entry No. 48 at 27). According to ipDatatel:

¹⁰ The court held that this term was invalid for indefiniteness under 35 U.S.C. § 112. (Docket Entry No. 122 at 43).

¹¹ ipDatatel argues that Alarm.com’s correction application was “fatally deficient.” (Docket Entry No. 14). But the application was approved and, under § 255, the corrected language controls. ipDatatel may raise this point on summary judgment or advise the court of any updates concerning the ’276 patent before the Patent and Trademark Office.

- The second amended complaint “admits that the mobile device ‘perform[s] the same functions previously accomplished through a dedicated control device,’” and fails to allege what is inventive about “association to synchronize” or how the invention performs a “synchronization.” (*Id.*).
- The second amended complaint alleges only that the software is “capable of performing an association to synchronize,” unlike the “specific allegations of how the claimed . . . limitation in *Aatrix* actually resulted in the alleged improvement.” (*Id.*).
- Claim 1’s elements fail *Alice*’s second step because reciting a “monitoring system” that “monitors” a home by receiving “sensor” data describes a conventional home-security system. (*Id.* at 28). The “receiving,” “sending,” and displaying” tasks are not inventive, because they are “functionally described” without an explanation of how the technology performs the tasks. (*Id.*). The “based on the synchronization” element is conventional because the “specification confirms that transmitting information from sensors to mobile devices was routine.” (*Id.*). The “interfaces” fail to supply an inventive concept because they “are claimed in terms of their functions . . . to control the monitoring system.” (*Id.* at 29).
- The ordered combination in the claim is not inventive because it “corresponds to the order in which a security guard could typically communicate with a property owner about an event and receive instructions from the owner.” (*Id.*).

ipDatatel argues that the other claims also fail to satisfy *Alice* step two because:

- claim 13’s “non-transitory computer readable storage medium” is a generic component that is not inventive, (*id.*);
- claims 2 and 14 are not inventive because the ’276 patent fails to “provide any detail for a ‘custom-built’ application,” and because the app performs only “functionally described operations,” (*id.* at 30); and
- claims 5 and 17, which “us[e] detection of an alarm event to determine if an alert should be displayed,” is conventional and routine. (*Id.*).

Alarm.com responds that the ’276 patent “improved preexisting home security technology” by “permit[ting] a mobile device running an app to perform the functions previously only accomplished through a dedicated control device.” (Docket Entry No. 121 at 23). Alarm.com argues that:

- As to claim 1, controlling the system from a smart device from a telephone company, not a home-security provider, “marked a significant departure from conventional home security system[s].” (*Id.*). To enable smart-device control, the claimed app software

performs an “association to synchronize” the smart device with the system. (*Id.*). Alarm.com argues that “in the context of a home security mobile app,” performing this task “was not previously known and presented technical challenges accomplished through the teachings of the ’276 patent.” (*Id.*).

- ipDatatel does not identify a sufficient basis to conclude “that configuring a ‘security panel’ to interoperate with a mobile device, from a different company, would have been routine or conventional.” (*Id.* at 24).
- Claim 1’s ordered combination is inventive because even though the ’276 patent uses generic components, it does so in an unconventional arrangement that satisfies *Alice* step two, and because ipDatatel “presents no evidence that the ordered steps were conventional.” (*Id.* at 24–25).
- Claims 2, 5, 13, 14, and 17 are patent-eligible for the same reasons. (*Id.* at 25).

The second amended complaint alleges facts as to the claims’ inventiveness that preclude a conclusive *Alice* step-two analysis at this stage. According to the specification, before the ’276 patent, the “field of home and small business security [was] dominated by technology suppliers who buil[t] ‘closed’ security systems, where the individual components (sensors, security panels, keypads) operate[d] solely within the confines of a single vendor solution.” (’276 Patent at 1:40–45). Homeowners could control and monitor prior-art systems using only “device[s] designed specifically, and exclusively, for the . . . system.” (Docket Entry No. 46 at ¶ 84). These dedicated devices had several disadvantages: (1) they ignored a growing “need for a heterogeneous, cross-vendor solution” driven by the proliferation of “smart” technology; (2) they were inferior to, for example, smartphones, because home-security companies lacked expertise in creating web-based solutions and consumer-friendly interfaces; and (3) they were difficult to install and integrate into existing systems. (’276 Patent at 2:24–47).

The second amended complaint alleges that the ’276 patent offered a solution to these problems: software and a smart-technology application enabling homeowners to monitor and control security systems with their smart devices. (Docket Entry No. 46 at ¶ 86). The ’276 patent

allows homeowners to synchronize their smart devices with their security system. (*Id.* at ¶ 86; *see* '276 Patent at 51:12–13). According to the second amended complaint, the '276 patent was the first invention to allow smart-device control over a home-security system, marking “a significant departure from conventional” systems. (Docket Entry No. 46 at ¶ 84). The second amended complaint specifically alleges that this smart-device control improved existing technology by offering homeowners enhanced functionality and flexibility to control and monitor their systems using a familiar device but from remote locations. (*Id.* at ¶ 92; *see* '276 Patent at 2:2–8).

Alarm.com argues that it:

does not claim to have invented cellular phones or smartphones, but does claim that the combination of new software embodied by the claimed application that can perform a synchronization, receive a communication, display a status interface area, display a control interface area that enables user input to control the monitoring system, receive user input defining a control operation, and, based on the user input and synchronization, send control communications that actually cause the monitoring system to perform the control operation was not well-understood, routine, or conventional.

(Docket Entry No. 121 at 24).

ipDatatel argues that because the second amended complaint acknowledges that smart devices perform the same function as dedicated devices, the patent lacks an inventive concept and fails *Alice* step two. But, as Alarm.com points out, the second amended complaint alleges that the software enhances the functionality of legacy alarm systems. *See Aatrix*, 882 F.3d at 1128. ipDatatel’s arguments attacking “association to synchronize” are irrelevant, because the Trademark and Patent Office corrected the patent so that it no longer contains that language. (*See* Docket Entry No. 143-2). Lastly, ipDatatel focuses on individual claim elements and fails to show that claim 1’s ordered combination is only conventional activity.

As with the other patents at issue, the second amended complaint alleges that prior-art systems created problems that the '276 patent solved in an unconventional manner, by enabling

smart-device control for the first time. As alleged and repeated by the patent claims and the specification, this innovation increased the functionality of preexisting systems and reduced hardware costs. On this record, the court cannot find by clear and convincing evidence that the patent fails *Alice*'s second step, precluding dismissal at this stage.

IV. Conclusion

Alarm.com's second amended complaint makes factual allegations, which ipDatatel disputes, that must be resolved to decide that the patents-in-suit are inventive and eligible for patenting under § 101. ipDatatel's renewed motion to dismiss is denied. (Docket Entry No. 118). ipDatatel may raise patent-ineligibility on summary judgment. The parties must jointly submit an amended scheduling and docket control order by **June 28, 2019**, setting out reasonable, efficient, fair and cost-effective discovery, dispositive motions, mediation, and trial steps, with deadlines for each.

SIGNED on June 5, 2019, at Houston, Texas.

A handwritten signature in black ink, reading "Lee H. Rosenthal". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Lee H. Rosenthal
Chief United States District Judge